



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
**75 Hawthorne Street**  
**San Francisco, CA 94105**

**SEP 26 2013**

Sergio Obregon  
National Environmental Policy Act Coordinator  
U.S. Army Garrison Yuma Proving Ground  
IMWE-YMA-PWE  
301 C Street  
Yuma, Arizona 85365-9498

Subject: Draft Programmatic Environmental Impact Statement of Activities and Operations at Yuma Proving Ground, Yuma County, Arizona (CEQ # 20130240)

Dear Mr. Obregon:

The U.S. Environmental Protection Agency has reviewed the above-referenced document pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

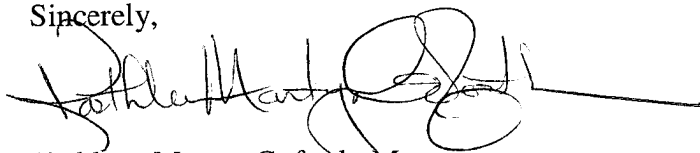
The Draft Programmatic Environmental Impact Statement assesses the impacts from the continuation of ongoing activities at Yuma Proving Ground, and implementation of new facilities, infrastructure, and programs to meet anticipated future needs. The range of alternatives includes the No Action Alternative, which continues current operations, and the Proposed Action Alternative, which expands activities. The Proposed Action is comprised of 138 discrete short-term projects and 14 discrete long-term projects. The DPEIS indicates that the Army may choose a subset of construction, testing, and training projects for implementation, and the subset would be clearly identified in the Record of Decision. The DPEIS also indicates that for certain short-term projects, project-level analysis under NEPA is provided and subsequent NEPA analysis would not be needed. Other projects are analyzed at a programmatic-level and would require subsequent, site-specific NEPA analysis.

We have rated the DPEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed EPA Rating Definitions) because (1) actions that the Army intends for the DPEIS to analyze at the project level, rather than the programmatic level, are not well defined, and it is therefore unclear whether an appropriate level of assessment has been completed, and (2) potential increases in testing and training activities that could result from expansions in capacity under the Proposed Action are not disclosed, making it difficult to gauge the intensity of impacts. We are also concerned with potential impacts to fire risk, hazardous materials, aquatic resources, air quality, and wildlife. Recommendations to address these issues are provided in our attached detailed comments.

We appreciate the opportunity to review this DPEIS, and are available to discuss our comments. If you have any questions, please contact me at 415-972-3521, or contact Jen Blonn, the lead reviewer for this project. Ms. Blonn can be reached at 415-972-3855 or blonn.jennifer@epa.gov.

Sincerely,

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A handwritten signature in black ink, appearing to read 'Kathleen Martyn Goforth', written over a horizontal line.

Kathleen Martyn Goforth, Manager  
Environmental Review Office (CED-2)

Enclosures: Summary of the EPA Rating System  
EPA Detailed Comments

# **SUMMARY OF EPA RATING DEFINITIONS**

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

## **ENVIRONMENTAL IMPACT OF THE ACTION**

### ***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

### ***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

### ***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

### ***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

## **ADEQUACY OF THE IMPACT STATEMENT**

### ***Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

### ***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

### ***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

**U.S. EPA DETAILED COMMENTS ON THE DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT OF ACTIVITIES AND OPERATIONS AT YUMA PROVING GROUND, YUMA COUNTY, ARIZONA, SEPTEMBER 26, 2013**

**Scope of Analysis**

The Draft Programmatic Environmental Impact Statement states that three types of activities are included within the Proposed Action: (1) short-term, well-defined, activities at known locations that could be implemented without additional analysis under the National Environmental Policy Act, (2) short-term, well-defined activities for which locations are not known that would receive additional NEPA analysis prior to implementation, and (3) long-term, less well-defined activities that would receive additional NEPA analysis prior to implementation. From EPA's review of the DPEIS, it appears that most actions were analyzed at a programmatic level. It is unclear which actions the Army intended to analyze at the project level within the DPEIS.

**Recommendations for the Final Environmental Impact Statement:**

- Augment the descriptions of proposed activities in tables 2-1 to 2-3 to clearly indicate whether the Army intends for the DPEIS to include a project or programmatic level NEPA assessment of impacts.
- Ensure that the FEIS contains a robust NEPA analysis, with comprehensive, site-specific disclosure of direct, indirect, and cumulative impacts, for any activities that the Army intends to move forward without subsequent NEPA analysis. Quantitative data should be used to gauge the intensity of anticipated impacts to the extent possible.

**Testing & Training Increases**

The activities included in the Proposed Action appear to greatly expand the capacity for testing and training activities at Yuma Proving Ground. For example, extending runways, constructing new vehicle test courses, constructing new drop zones, expanding munitions impact areas, and establishing new gun positions, among other activities, would enable increased testing and training activities. In addition, the DPEIS frequently references increases in testing and training. It is, however, unclear exactly what this entails. The DPEIS does not indicate the degree to which specific testing and training may increase. Without this information, the intensity of potential impacts cannot be adequately understood, planned for, and mitigated. Page 3-88 indicates that, "No new employees are anticipated to relocate to the area as a result of the Proposed Action." It is unclear how the apparent proposed increase in capacity for testing and training could be fully utilized without an increase in population.

**Recommendations for the FEIS:**

- Augment the description of the Proposed Action in Section 2 to provide quantitative measures of the degree to which specific testing and training activities could increase. For example, disclose the anticipated increase in frequency (as a number or percentage) of flights, munitions fired, training exercises, and other activities that could be supported by the Proposed Action.
- Consider presenting a range of potential increases in testing and training activities (such as various percentages of increase from the current baseline) that could meet future needs.

- Augment Section 3 to disclose direct, indirect, and cumulative impacts from the specific increases in testing and training that would be likely to result from implementation of the Proposed Action.
- Discuss the potential for increases in testing and training activities under the Proposed Action to induce population increases on or near YPG, disclose any potential associated environmental impacts (such as increased water demand), and identify measures that could mitigate those impacts.

### **Fire Prevention & Management**

The Proposed Action and the No Action alternatives include military testing and training activities that have ignition as a by-product. The DPEIS discloses that such activities have the potential to create wildfires. As explained in the DPEIS, a 2005 wildfire that originated on YPG burned more than 30,000 acres, including 26,000 acres in the neighboring Kofa National Wildlife Refuge. Vegetation clearing and other ground disturbance provide conditions favorable to establishment of exotic invasive species, which increase fuel loads and carry fires well, resulting in larger and more intense wildfires (page 3-41). The Proposed Action increases disturbance on up to 88,120 acres in the Cibola Region and 83,182 acres in the Kofa Region for unmanned aircraft system launch/recovery, transient gun positions, construction and utility installation, dismounted maneuver areas, vehicle test courses, and munitions impact areas (page 3-43). In addition, the DPEIS indicates that, in the event that a wildfire develops in the Kofa or Cibola Regions, fire suppression would not be undertaken in many zones due to potential danger from unexploded ordnance.

We understand that efforts are underway to reduce the fire risk posed by exotic invasive species. The DPEIS explains that, “[a] program to establish exclusion, monitoring, and eradication of all invasive plants on YPG is in the beginning stages,” and an Invasive Species Management Plan is expected to be finalized in 2013 (page 3-132). EPA is concerned, however, that the DPEIS does not commit to implement wildfire mitigation measures prior to undertaking actions that could increase wildfire risk. In addition, we are concerned that eradication of invasive species is not always a realistic goal; management to control invasive species may be more appropriate. We also note that both eradication and control programs would likely involve increases in pesticide use, and potential increases do not appear to be discussed.

### **Recommendations for the FEIS:**

- To the extent possible, provide quantitative measures and qualitative discussion of the increased risk of fires that could result from specific increases in testing and training under the Proposed Action. For example, analyze the degree to which specific increases in ignition sources and impacted land acreages translate into potential increases in fire risk. Include measures to avoid, minimize, and mitigate risk from specific testing and training activities.
- Describe how fire prevention and management is considered in the siting of testing and training activities, and include a map with high-risk fire areas overlaid with proposed activities.
- Provide additional information on the Invasive Species Management Plan, including strategies for the proposed eradication of invasive species and any potential increases in

pesticide use. Consider whether a goal of management, rather than eradication, may be appropriate.

- Commit to implement measures to avoid, minimize, and mitigate fires *before* implementing expanded or new activities that would increase fire risk, such as increasing personnel tasked with spotting fires during training exercises.
- Commit to target areas already populated with invasive species, where consistent with project objectives, when determining the locations for projects that require vegetation to be cleared, and implement measures to prevent the spread of invasive species during land clearing activities.
- Describe any increased fire risks that YPG could experience due to changing climate conditions, and explain how such risks would be addressed.

### **Contamination**

Several removal and remedial actions have already taken place on site, and “[d]ata indicate that other sites on YPG warrant remedial response and ongoing studies at these sites will be used to determine an appropriate strategy” (page 3-48). The Proposed Action does not discuss whether lessons learned from historic contamination have informed future plans to avoid, minimize, and mitigate soil and water contamination.

The DPEIS suggests that contaminants are not migrating off-site or into groundwater. Preventive measures are highlighted, such as the regular collection of spent depleted uranium rounds, and use of a catchment structure with an evaporative lagoon sized to accommodate a 100-year flood. Similarly, DPEIS indicates that munitions constituents of concern, including cadmium, mercury, arsenic, chromium, copper, lead, and zinc, do not migrate beyond designated impact areas. While supporting studies are cited, the DPEIS does not include sufficient information, such as a summary of studies, recent data, and future projections. It is unclear, from the DPEIS, whether current protections are sufficient for current, or future, conditions. Increases in testing and training activities would necessitate increases in use of hazardous materials, which would increase the potential for contaminants to accumulate in soils, infiltrate groundwater, flow into washes or off-site via stormwater, or be accidentally spilled.

### **Recommendations for FEIS:**

- Provide quantitative measures and qualitative discussion of the potential increase in the release of contamination into soil and groundwater that could result from specific increases in testing and training under the Proposed Action. Include measures to monitor and mitigate impacts from specific testing and training activities. To clarify potential risks, we recommend providing a table with (1) actions that generate contaminants, (2) specific contaminants of concern, (3) mitigation measures, and (4) monitoring actions.
- Provide maps that depict areas of known contamination as well as locations of past and planned cleanups in order to better disclose existing conditions that would be impacted and likely cumulative impacts.
- Augment the discussion of cleanups on page 3-48 to describe how lessons learned from historic contamination have informed future plans to avoid, minimize, and mitigate soil and water contamination.
- Clearly describe, through discussion and maps, plans and locations for sampling to help ensure that contaminants do not migrate into the groundwater or off-site.

- Ensure that likely future changes in precipitation under climate change scenarios are considered in an evaluation of whether a 100-year flood sized evaporative lagoon would continue to be appropriate for the depleted uranium catchment structure.

## **Aquatic Resources**

### *Stormwater*

YPG contains numerous desert washes onsite that remain dry most of the year, and can experience flash flooding during heavy rains. Surface drainage from the western portion of the site flows into the Colorado River, and drainage from the central and eastern regions flows into the Gila River (page 3-149). Both rivers are listed on the Arizona 2006/2008 List of Impaired Waters (3-150).

The DEIS indicates that water arriving in both rivers during flood events is “typically good quality,” (3-150) and that the Proposed Action would not result in further degradation (3-157). Documentation to support these conclusions is not provided. Further, activities under the Proposed Action would disturb thousands of acres of desert habitat and add hundreds of acres of impervious surfaces, which could increase runoff. Expanded use of drop zones, potential increases in frequency of fires, expanded vehicle testing activities, and increased munitions impacts, among other new and expanded activities, could decrease the quality of stormwater.

### **Recommendations for the FEIS:**

- Site transient gun positions, and other facilities and activities that would disturb vegetation, away from washes.
- Clearly define plans to regularly monitor stormwater quality.
- Include the Stormwater Pollution Prevention Plan as an appendix to the FEIS since measures contained within it will largely influence the intensity of impacts.

### *Groundwater Demand*

Page 3-35 states that the proposed water treatment plant would increase demand for groundwater, but any subsidence associated with the increased withdrawal would be minor to moderate and no surface fissures would result. Water demand would also increase from development of a new well. Increased demand for groundwater is not estimated, and it is, therefore, unclear how conclusions regarding the intensity of impacts were reached.

### **Recommendations for the FEIS:**

- Provide quantitative measures of projected increases in demand for groundwater, and explain how results were calculated.
- Commit to implement water conservation measures in buildings and operations. Guidance on water efficient products for use in buildings is available at <http://www.epa.gov/watersense/>, and recycled water can be used for vehicle washing and other maintenance activities.
- Clearly define plans to regularly monitor groundwater. Include a map depicting sampling wells overlaid with potential contaminant sources.

#### *Clean Water Act Section 404*

The DEIS states that a CWA 404 permit would be required for proposed improvements to Aberdeen Road in the Castle Dome Wash between U.S. Highway 95 and the Kofa Cantonment (page 3-158). The acreage of potential fill into Waters of the U.S. is not provided, nor is information on compliance with the CWA Section 404(b)(1) Guidelines.

#### **Recommendations for the FEIS:**

- Disclose whether any projects within the Proposed Action alternative, aside from the Aberdeen Road improvements, would require a CWA 404 permit.
- Clarify whether the Army intends to complete subsequent NEPA analysis for projects within the Proposed Action that would require a CWA 404 permit.
- If this DPEIS is intended to provide project-level analysis of any action that would require a CWA 404 permit, then the FEIS should include a detailed evaluation of the project alternatives in order to demonstrate the project's compliance with the 404(b)(1) Guidelines. The alternatives analysis should demonstrate that the proposed project is avoiding and minimizing damage to waters to the maximum extent practicable.

#### **Air Quality**

The southwest corner of the Laguna Region of the YPG is a nonattainment area (moderate) for the 24-hour National Ambient Air Quality Standard for PM10. The project area is in attainment for all other criteria pollutants. Appendix D includes a General Conformity Record of Non-Applicability, which addresses specific, and very limited, construction activities. Operational emissions from use of new facilities, including indirect emissions from traffic, testing, and training activities, do not appear to be included.

Page 3-14 explains that, "aircraft operations may increase under the Proposed Action and there would likely be a trend to use larger [unmanned aircraft systems]. Either of these could result in an increase in aircraft emissions during testing and training." Similarly, expanded and new vehicle test courses would likely lead to increased vehicle emissions, and expanded and new drop zone and munitions impact areas would likely further lead to increased emissions. In order to understand the intensity of increased air emissions, information is needed on the degree to which operational activities could increase at YPG.

#### **Recommendations for the FEIS:**

- Ensure that all applicable projects, and their associated direct and indirect impacts, are included in the general conformity review provided in Appendix D.
- Provide quantitative measures and qualitative descriptions of the air emissions that could result from specific increases in testing and training under the Proposed Action. Identify measures to avoid, minimize, and mitigate air emissions impacts from specific testing and training activities.
- Commit to minimize construction air emissions through cleaner diesel technologies, anti-idling policies, and other best practices. See EPA's cleaner diesel website for information on specific best practices (<http://www.epa.gov/diesel/>), and specify, in the FEIS, which strategies would be implemented.



- Ensure that activities that create air emissions are scheduled with consideration of temperature inversions that occur on YPG due to topography (as described in Appendix C, Section E-1, Question 4).

### **Valley Fever**

The Centers for Disease Control and Prevention's website explains that, "valley fever is caused by *Coccidioides*, a fungus that lives in the soil in the southwestern United States...inhaling the airborne fungal spores can cause an infection." Exposure can cause flu-like symptoms, or, in a very small proportion of people, the infection can spread from the lungs to the rest of the body and cause more severe conditions, even death. Based on the CDC's website, it appears that YPG is in a region where valley fever is mildly endemic. For more information, please see: <http://www.cdc.gov/features/valleyfever/>. Ground disturbing activities can release spores into the air, creating an exposure risk via inhalation. The DPEIS does not discuss potential impacts related to valley fever.

#### **Recommendations for the FEIS:**

- Discuss the potential valley fever risk under the No Action and Proposed Action alternatives. If appropriate, include measures to avoid, minimize, and mitigate impacts, including outreach to ensure YPG personnel are aware of risks, symptoms, and treatments.

### **Wildlife**

The Sonoran desert tortoise is a candidate for listing under the Endangered Species Act, and inhabits the YPG. In addition, Sonoran pronghorn is endangered under the ESA, and an experimental population established through captive breeding was released into the neighboring Kofa National Wildlife Refuge in 2013 and is expected to inhabit YPG (page 3-110). The DPEIS explains that direct impacts to threatened and endangered species would result from displacement or incidental mortality, and indirect impacts would result from disturbance that leads to nest/den abandonment, loss of habitat, or disruption of migratory pathways (page 3-114). Impacts would be avoided, minimized, and mitigated through site selection of military activities, relocation of species, and procedures established in the Integrated Natural Resource Management Plan. The role of U.S. Fish and Wildlife Service and Arizona Game and Fish Department in addressing impacts to species is not discussed. Their expertise could help to minimize impacts.

#### **Recommendations for the FEIS:**

- Coordinate with FWS to ensure compliance with the Endangered Species Act, and with FWS and AGFD on best practices to minimize impacts to wildlife. Document this coordination in the FEIS.
- Include maps that depict key wildlife habitats and corridors on YPG in order to disclose potential impacts and inform decisions on siting facilities and activities.
- Include the Integrated Natural Resource Management Plan as an appendix to the FEIS since measures contained within it will largely influence the intensity of impacts.
- If this DPEIS is intended to provide project-level analysis of any action that would impact wildlife, then the FEIS should include more detailed information on the location of impacts and the number of individuals that would likely be taken or disturbed.

**Renewable Energy**

EPA is pleased to see that the Army is considering development of a commercial scale solar renewable energy project on YPG, which is currently going through a separate NEPA process. In order to protect pristine lands and minimize environmental impacts, EPA's Re-Powering America initiative encourages renewable energy development on current and formerly contaminated lands.

**Recommendations for the FEIS:**

- Consider siting the proposed solar energy project on a current or formerly contaminated site within YPG, which may have limited other uses due to past activities. Resources are available on EPA's Re-Powering America website at: <http://www.epa.gov/oswercpa/>.